FUTURE FISHERIES IMPROVEMENT PROGRAM
GRANT APPLICATION

I. APPLICANT INFORMATION

A. Applicant Name: Bitterroot National Forest, West Fork Ranger District

B. Mailing Address: 6735 West Fork Road City or Town: Darby

C. State: Montana Zip: 59829 Telephone: 406-821-3269

D. Contact Person: Michael J. Jakober, Bitterroot National Forest fisheries biologist

Address if different from Applicant: West Fork Ranger District
6735 West Fork Highway
Darby, MT 59829

Telephone: 406-821-3269 (email mjakober@fs.fed.us)

E. Landowner and/or lessee name, address, telephone (if other than Applicant):

II. PROJECT INFORMATION*

A. Project Name: Cameron Creek Streambank Restoration
River, stream, or lake: Cameron Creek

Location Township: 2 N Range: 18 W Section: 27, SW ¼ (French Basin
GPS NAD 83 N 45.89396° W 113.95725° Quad)

County: Ravalli

B. Purpose of Project: The purpose of this project is to improve westslope cutthroat trout habitat by rebuilding seven sections of collapsed and eroding stream banks along Cameron Creek.

C. Brief Project Description: This project proposes to rebuild seven collapsed sections of stream bank along Cameron Creek on Bitterroot National Forest land on the floor of French Basin. The combined length of the seven treatment sites is approximately 400 lineal feet. At each treatment site, the stream bank would be reconstructed using 2-4 lifts of bio-fabric rolls laced with dormant willow cuttings and wooden stakes, and filled with screened topsoil and fill (see the attached design drawing). Brush fascine would be secured to the bottom of the reconstructed bank to define the edge of water and help narrow the channel back down to its natural width. The surface of the reconstructed banks would be planted with a certified grass seed mix, fertilized with an organic fertilizer, and covered with weed-free straw mulch to minimize erosion. Existing sod mats would be conserved to the extent possible and replanted across the surface of the reconstructed banks. Implementation of the project would occur at late summer or autumn base flows during the 2014 field season. The work would be conducted by Bitterroot National Forest watershed, fisheries, and botany personnel. Equipment used would consist of a backhoe/excavator with moveable thumb, a dump truck, and a hand crew.

The Forest Service is authorizing the collection of funds from FWP under the authority of, and thus subject to, the terms and conditions of the Cooperative Funds Act of June 30, 1914 USC 498, as amended by Public Law 104-127.

D. Length of stream or size of lake that will be treated: Seven sites totaling 400 lineal feet of stream bank. The 400 feet of treatment is scattered throughout a 1000-foot section of Cameron Creek.

E. Project Budget
Grant Request (Dollars): $3,000

Contribution by Applicant (Dollars or In-kind): $8,200

Contribution from other Sources (Dollars): The Bitterroot National Forest has been awarded $3,000 from the Ravalli County Resource Advisory Committee to implement this project. The Forest also plans on applying for $3,000 from the Montana Sikes program.

Total Project Cost:

F. Attach itemized (line item) budget – see template. *The budget form is attached to the back of this application*.

G. Attach specific project plans, detailed sketches, photographs, maps, evidence of landowner consent, evidence of public support and/or other information necessary to evaluate the merits of the project. *Site photographs, a design drawing, and maps are attached to this application*.

H. Attach land management and maintenance plans that will ensure protection of the reclaimed area. *The Bitterroot National Forest will be responsible for maintaining the restored stream banks. The project area is part of the Sula Peak-East Fork grazing allotment.*

III. PROJECT BENEFITS*

A. **What species of fish will benefit from this project?**: Westslope cutthroat trout and brook trout.

B. **How will the project protect or enhance wild fish habitat?**: There are two species of wild trout that occur in the project area: westslope cutthroat trout (native) and brook trout (introduced). Brook trout are the more common of the two. The project area consists of a Rosgen C4/C5 type channel. In that type of channel, undercut banks with overhanging willow shrubs provide the best hiding cover for westslope cutthroat trout and brook trout. The seven treatment sites in this project currently provide no hiding cover for either species of trout and are barren of shrubs. This project would enhance trout habitat by restoring undercut banks and willow shrubs to approximately 400 feet of Cameron Creek. Another positive aspect of this project is that it would narrow the stream channel back down to its natural width, which would benefit trout in two ways: (1) it would reduce solar exposure and help keep the water colder (temperatures in Cameron Creek impaired as a result of channel widening and loss of willow cover); and (2) narrower and deeper channels provide superior trout habitat compared to wider and shallower channels.

C. **Will the project improve fish populations and/or fishing? To what extent?**: Yes, this project would benefit fish populations and fishing in the project area by increasing the amount and quality of good hiding cover. This often results in better trout survivorship to adulthood. An indirect benefit which may occur over time is better trout survivorship in the project area contributes to improved recruitment of trout to the East Fork Bitterroot River. Cameron Creek is a spawning and rearing tributary to the East Fork Bitterroot River. Cameron Creek is lightly fished by local residents. No angler/use days were recorded in the 2009 Montana Fish, Wildlife, and Parks angler use survey. The East Fork Bitterroot River receives moderate to heavy angler use. The 2009 Montana Fish, Wildlife, and Parks angler use survey estimated that the East Fork Bitterroot River received 7,391 angler days. About 40% of the use was by residents.

D. **Will the project increase public fishing opportunity for wild fish and, if so, how?**: The project

will not affect angler access, but over time, it has the potential to contribute to improved trout recruitment to the East Fork Bitterroot River. Refer to the answer to question C above.

E. **If the project requires maintenance, what is your time commitment to this project?**: For the first few years after implementation, the restored stream banks will be monitored several times a year by Bitterroot National Forest fisheries biologists to ensure that vegetative recovery is progressing and damage from livestock grazing is not occurring. Once satisfactory vegetative recovery is achieved, the restored stream banks will be monitored about once per grazing season.

F. **What was the cause of habitat degradation in the area of this project and how will the project correct the cause?**: The project area is part of the Sula Peak-East Fork grazing allotment. The stream banks proposed for treatment in this project were originally damaged by years of heavy livestock grazing which started in the 1940's and continued until the 1990's. Since 2000, the project area has only received light and sporadic livestock grazing. In 2010, the Forest issued a new grazing permit which implemented a rest-rotation grazing system (e.g. pastures receive full year-long rest from all grazing approximately every other year) for the project area and restricted grazing to a couple weeks by low numbers of livestock during the years of non-rest. The 2010 grazing system is expected to satisfactorily protect the restored banks from additional damage. If monitoring indicates that damage is occurring, then other measures such as riparian fencing or additional reductions in livestock numbers and access would be implemented. .

G. **What public benefits will be realized from this project?**: This project is another incremental step in improving the fishery and water quality in the Cameron Creek and East Fork Bitterroot River watersheds. The East Fork Bitterroot River is a 303(d)-listed stream with siltation and water temperature impairments. The Bitterroot Water Forum, a citizen-based group in Ravalli County dedicated to improving the health of the Bitterroot River watershed, is also implementing stream bank restoration projects (willow planting and 11,000 feet of riparian fencing) on the private ranches above and below our project. Our project would dovetail nicely with their projects.

H. **Will the project interfere with water or property rights of adjacent landowners?** (Explain): No. The project will not affect water rights or private property rights.

Each approved project sponsor must enter into a written agreement with the Department specifying terms and duration of the project.

IV. AUTHORIZING STATEMENT

I (we) hereby declare that the information and all statements to this application are true, complete, and accurate to the best of my (our) knowledge and that the project or activity complies with rules of the Future Fisheries Improvement Program.

Applicant Signature: *Michael J. Jakober* Date: *January 2, 2013*
Michael J. Jakober
Bitterroot National Forest south zone fisheries biologist

Sponsor (if applicable): *Chris Clancy* Date: *January 2, 2013*
Chris Clancy
Montana, Fish, Wildlife and Parks fisheries biologist

***Use extra paper, if necessary. Incomplete or late applications will be returned to the applicant.**

Mail To: Montana Fish, Wildlife & Parks
Habitat Protection Bureau
P.O. Box 200701
Helena, MT 59620-0701

Revised 9-28-01

Budget – Cameron Creek Streambank Restoration

Budget Category	Expense per Category	USFS In-Kind Match	Other Federal Funds	Other Matching Funds
Salaries & Benefits ($): • NEPA (Decision Memo) (USFS GS-11 @ $400/day) • ESA consultation (USFS GS-11 @ $400/day) • Permit acquisition (USFS GS-11 @ $400/day) • Project Design (USFS GS-11 @ $400/day)	 $1,600 $400 $400 $2,000	 $1,600 $400 $400 $2,000		
Contract Cost (includes): • Equipment & Labor • Mobilization • Materials	$9,800	$3,800	$3,000 (Ravalli County RAC)	**$3,000 (FWP Future Fisheries)**
TOTALS	$14,200	$8,200	$3,000	$3,000

Cameron Creek Streambank Restoration Project – Summary & Photos

Who? Bitterroot National Forest, Michael Jakober

Where? Bitterroot National Forest, Sula Ranger District. The isolated USFS land parcel in the SW ¼ of Section 27. Immediately downstream of the Shining Mountain Ranch. See the maps attached to this application.

What? Requesting $3,000 from the Future Fisheries program to rebuild seven collapsed stream banks along Cameron Creek on Forest Service land downstream of the Shining Mountain Ranch. The combined length of the seven collapsed banks is about 400 lineal feet.

Project Objective: Restore natural channel dimensions and vegetation to the collapsed stream banks. The damage was caused by heavy legacy (1940's to 1990's) livestock grazing.

Project Goals:

- Improve westslope cutthroat trout habitat
- Reduce bank erosion and sediment input to Cameron Creek
- Help ameliorate sediment and water temperature impairments in the East Fork Bitterroot River

Treatment Site 1

Treatment Site 2

Treatment Site 3

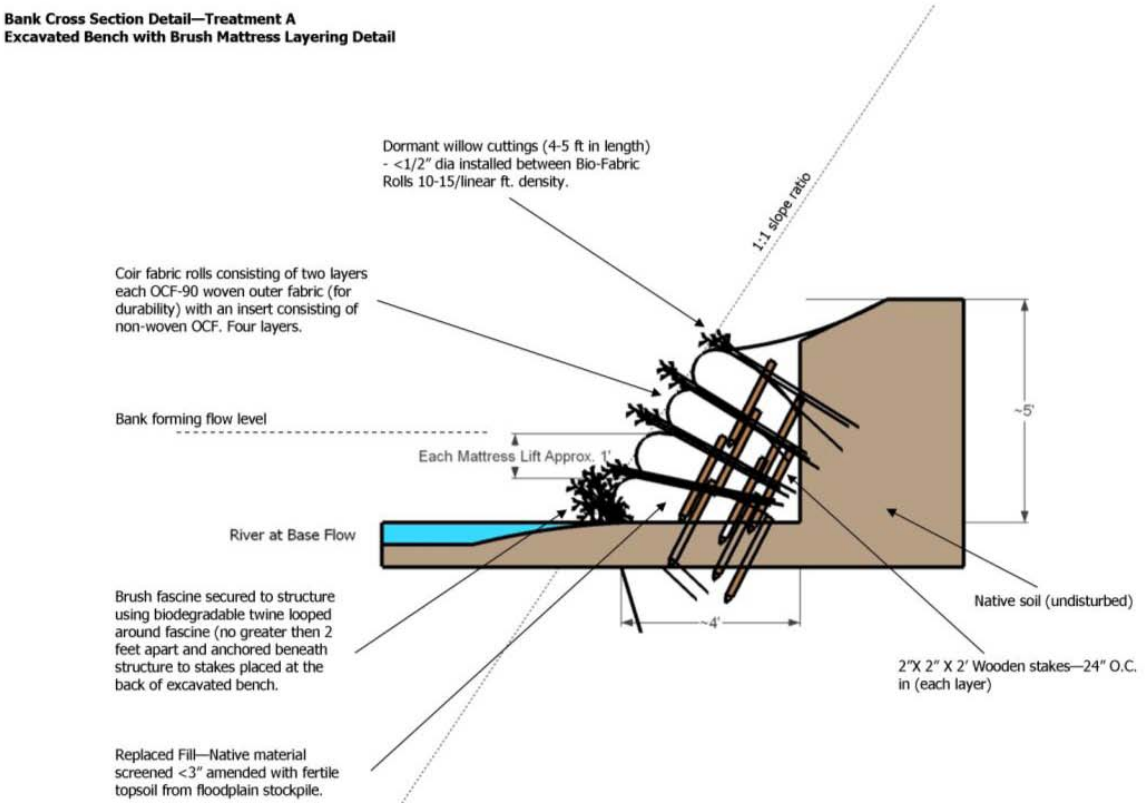
Treatment Site 4

Treatment Site 5

Treatment Site 6

Treatment Site 7

Methods:
At each of the seven treatment sites, the stream bank would be reconstructed using 2-4 lifts of bio-fabric rolls laced with dormant willow cuttings and wooden stakes, and filled with screened topsoil and fill (see the design drawing below). Brush fascine would be secured to the bottom of the reconstructed bank to define the edge of water and help narrow the channel back down to its natural width. The surface of the reconstructed banks would be planted with a certified grass seed mix, fertilized with an organic fertilizer, and covered with weed-free straw mulch to minimize erosion. Existing sod mats would be conserved to the extent possible and replanted across the surface of the reconstructed banks. Labor would be provided by Bitterroot National Forest watershed, fisheries, and botany personnel. Equipment used would consist of a backhoe/excavator with moveable thumb, a dump truck, and a hand crew.



Cost: Total project cost is estimated at approximately $14,200. $3,000 is being requested from the Future Fisheries program. The Bitterroot National Forest has been awarded $3,000 from the Ravalli County Resource Advisory Committee. The USFS will contribute the rest.

When? Implement at base flows in late summer or autumn, 2014

Why?

- This project would create better habitat for westslope cutthroat trout
- The damage that has occurred at most of the seven treatment sites is too extensive to naturally heal itself in the next 20 years

- Cameron Creek is one of the main sources of elevated sediment and water temperature in the East Fork Bitterroot River. The East Fork Bitterroot River is designated (Clean Water Act 303(d) list) as an impaired water body because of siltation and elevated water temperature.
- This project would be an incremental step in reducing the sediment loads and water temperatures exiting Cameron Creek and entering the East Fork Bitterroot River.
- The Bitterroot Water Forum and local landowners are starting to work together to improve the water quality in Cameron Creek and the East Fork Bitterroot River.